

IN THE CLAIMS

1. (Original) A CMP abrasive comprising:
a ceria slurry; and
a chemical additive having two or more functional groups by mixing and synthesizing a polymeric molecule and a monomer.

2. (Original) A CMP abrasive as defined in claim 1, wherein said ceria slurry comprises ceria powder, water and negative-ion-based polymeric compound and conforms to a Newtonian viscosity behavior.

3. (Original) A CMP abrasive as defined in claim 2, wherein said negative-ion-based polymeric compound is selected from the group consisting of polymethacrylic acid, ammonium polymethacrylate, polycarboxylate and carboxyle-acryl polymer.

4-11. (Cancelled)

12. (Original) A method for manufacturing CMP abrasive comprising steps of:
providing a ceria slurry;
manufacturing a chemical additive having two or more functional groups by mixing and synthesizing a polymeric molecule and a monomer in a reactor; and
mixing said slurry and said chemical additive.

13. (Original) A method for manufacturing CMP abrasive as defined in claim 12, wherein said step of providing a ceria slurry comprising steps of:
manufacturing ceria by solid-phase synthesis;
mixing said ceria with water;
milling said mixture with a high energy attrition mill;
dispersing said milled resultant with a high pressure dispersion apparatus; and
dispersion stabilizing said dispersed resultant by adding negative-ion-based polymeric compound.

14. (Original) A method for manufacturing CMP abrasive as defined in claim 13, wherein said negative-ion-based polymeric compound is selected from the group consisting of polymethacrylic acid, ammonium polymethacrylate, polycarboxylate, and carboxyle-acryl polymer.

15. (Previously presented) A method for manufacturing CMP abrasive as defined in claim 13, wherein said negative-ion-based polymeric compound of 0.0001 ~ 10% by weight is added.

16. (Original) A method for manufacturing CMP abrasive as defined in claim 13, after said step of dispersion stabilizing, further comprising a step of removing large particles with a filter.

17. (Previously presented) A method for manufacturing CMP abrasive as defined in claim 12, wherein the molecular weight of the polymeric molecule is 2,000 ~ 1,000,000.

18. (Previously presented) A method for manufacturing CMP abrasive as defined in claim 12, wherein said step of manufacturing the chemical additive further comprises a step of adding further solvent to the synthesized chemical additive.

19. (Original) A method for manufacturing CMP abrasive as defined in claim 18, wherein said step of adding further solvent causes the synthesized chemical additive to be 0.03 ~ 10% by weight.

20. (Previously presented) A method for manufacturing CMP abrasive as defined in claim 12, wherein in said chemical additive, said polymeric molecule is polyacrylic acid (PAA) or alkyl methacrylate, and said monomer is selected from the group consisting of acrylamide, methacrylamide, ethyl-methacrylamide, vinylpyridine, and vinylpyrrolidone.

21. (Original) A method for manufacturing CMP abrasive as defined in claim 20, wherein the mixing ratio of said slurry to said chemical additive is 1:1.

22. (New) A CMP abrasive as defined in claim 1, wherein in said chemical additive, said polymeric molecule is polyacrylic acid (PAA) or alkyl methacrylate, and said monomer is selected from the group consisting of acrylamide, methacrylamide, ethyl-methacrylamide, vinylpyridine, and vinylpyrrolidone.

23. (New) A CMP abrasive as defined in claim 22, wherein mixing ratio of said slurry to said chemical additive is 1:1.